

From glowbugs@theporch.com Tue Nov 19 15:47:47 1996
Return-Path: <glowbugs@theporch.com>
Received: from uro (localhost.theporch.com [127.0.0.1]) by uro.theporch.com
(8.8.3/AUX-3.1.1) with SMTP id PAA12163; Tue, 19 Nov 1996 15:41:59 -0600 (CST)
Date: Tue, 19 Nov 1996 15:41:59 -0600 (CST)
Message-Id: <199611192141.PAA12163@uro.theporch.com>
Errors-To: conard@tntech.campus.mci.net
Reply-To: glowbugs@theporch.com
Originator: glowbugs@theporch.com
Sender: glowbugs@theporch.com
Precedence: bulk
From: glowbugs@theporch.com
To: Multiple recipients of list <glowbugs@theporch.com>
Subject: GLOWBUGS digest 357
X-Listprocessor-Version: 6.0c -- ListProcessor by Anastasios Kotsikonas
X-Comment: Please send list server requests to listproc@theporch.com
Status: 0

GLOWBUGS Digest 357

Topics covered in this issue include:

- 1) Re: 6HF5 bottles needed
by Doug <doug@sunrise.alpinet.net>
- 2) 6BM8 xmtr
by Glenn Finerman <GFINDER@nms.com>
- 3) Re: Ma Hartley (I call her ``Grandma Hartley'' cuz she was firstborn)
by rdkeys@csemail.cropsci.ncsu.edu
- 4) 6BM8 wiring and schematic
by lee@radioadv.com (Lee Richey)
- 5) Re: 6BM8 wiring and schematic
by jeffd@coriolis.com (Jeff Duntemann)
- 6) Visio schematics in Word files
by jeffd@coriolis.com (Jeff Duntemann)
- 7) Email publishing standards for schematics etc
by rdkeys@csemail.cropsci.ncsu.edu
- 8) Re: Visio schematics in Word files
by okasb@rex.mtv.gtegsc.com (Bob Okas)

Date: Mon, 18 Nov 1996 21:02:33 -0700
From: Doug <doug@sunrise.alpinet.net>
To: glowbugs@theporch.com
Subject: Re: 6HF5 bottles needed
Message-ID: <32913159.20AD@alpinet.net>

Hi Brian...I appologize for being so long in getting back to you about

your tube needs, but I have the typical Bad news/Good news senario. I spent the better part of yesterday searching my tube supply for the dreaded 6HF5, to no avail. I did find and pull out sufficient tubes to repair my R390A...another story. So, I contacted RF Parts in San Marcos California, 1-800-737-2787. They HAVE the 6HF5's in stock. So, there's the answer to your dilemma, assuming the thought of paying the going rate for them dosent strike fear in your heart...or pocketbook.

On another topic, I talked to International Crystal today re some GP rocks for Glowbuggers to use on 160/80/40 meters. For your basic, 32 picofarad rock, in the F-609 holder their price is \$16.45, so I ordered one for 40 meters. I'll use it in my little project cooking on the bench right now. So, there is ONE source for rocks...and they have always stood behind their product...only had one go bad in 30 years of dealing with Ic, and they fixed it right now.

Sorry I could'nt come up with the tube, there's a bunch in the boxes, just not what you needed. I even went the sub route, just in case one might be workable...no joy...at least using what books are available to me. Most of what I've got are WWII stuff...lots of older tubes and some mid to late 50's issue too.

So, good luck and talk to ya later....

Doug Dunn, K7YD

Date: Tue, 19 Nov 1996 09:43:41 -0500
From: Glenn Finerman <GFINER@nms.com>
To: glowbugs@theporch.com
Subject: 6BM8 xmtr
Message-ID: <s291816e.036@nms.com>

I just took a look at Lee's 6BM8 xmtr on the web page.
VERY VERY NICE!!!! What a great idea using double sided PC board as a chassis top on an inverted alu box. Easy to drill and form, you can solder to it, strong enough to hold the transformer, no exposed voltages. I'm definitely going to use this technique for my glowbug project! (when I move to the new QTH).
I really wish I could join you folks again on the GB/BA freq.
Everything has been packed except for my 51S-1, which keeps me from going out of my skull every night (I'm not a TV watcher at all!!)
I'll give a listen this evening on 3579 and see who squeezes down the lump of wire I'm using for an antenna.

73.....Glenn N2BJG gfiner@nms.com

Date: Tue, 19 Nov 1996 12:55:20 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: bry@mnsinc.com
Cc: rdkeys@csemail.cropsci.ncsu.edu (), glowbugs@theporch.com
Subject: Re: Ma Hartley (I call her ``Grandma Hartley'' cuz she was firstborn)
Message-ID: <9611191755.AA101183@csemail.cropsci.ncsu.edu>

>
> BA Bob - are YOU the one that has the Hartley plans?
> I'd love to try one but it must be a clean signal if I do.
> The idea of loose coupling makes sense. How many turns do you use
> over the cold end of the primary to get a signal out to the aerial?

Yeah, I guess I will lay claim to that bit of infamy.....(:+}}....

It doesn't matter a willynilly how many turns you use. It DOES matter how tightly it is coupled. When one thinks of coupling, and especially loose coupling of OT self-controlled oscillator rigs, the standard term is ``inches of coupling''. That is taken to mean --- how many inches of space is there between the oscillator tank circuit and the pickup coupling coil, be it a 1 or 2 turn link or a complete inductively coupled tank of 25 turns or so. If you wind a link over the cold end (there is no cold end in a Hartley), it will be highly overcoupled and sound like one of the Cuban T-1 RAC notes running on 25 cycle power.

> Where can I get the plans?

Do you have a postscript printer available to print from?
If so, they are on the BA archives at ftp.theporch.com in the directory /pub/mailling-lists/boatanchors. Look for the files with names gg32*.*.

If you can't print postscript anywhere, I can probably generate an output copy for you sometime. The best way to do it is download the postscript printer file and just print it out on unix or dos or CP/M. Windoz, yer on yer own.....

> Bry
>
> > > > First, build the Hartley from the plans Bob has posted (the
> > > > 1934 QST article), and use a type 45 tube if you can find
> > > > one.
> > > > Build it strong and tough and don't scrimp on the parts.

Amen. Build a 1 watt Hartley using minimally 10 watt or larger components.

Build a 10 watt Hartley using minimally 100 watt or larger components.
Build a 20 watt Hartley using minimally 250 watt or larger components.

That is the secret to stability, if you properly loosely couple the thing so that you get OUT no more than about 20 percent of the input power.

On 160 meters you can couple out up to 30 percent or so, but on 80 or 40, you can only do maximally 20 percent reliably. BEWARE if you try to push otherwise. Also, a very stable power supply helps, although I usually do fine running mine off dynamotors. A 300vdc plate battery composed of a bunch of 7ah/12vdc sealed lead acid batteries (pulled from industrial emergency lighting systems) does wonders for a stable Hartley oscillator.

> Bob haas a really neat 'reprint' of that QST article that he has in
> postscript format. If you ask him, I am sure he would send you a copy.
> When I was still gainfully employed by Tennessee Tech I had a FTP
> server running with that article and several MB of photos of Bob's
> handiwork with Hartleys and regens and other schematics of interest. I
> don't know if anyone may still have any of that ona floppy or not.

Much of that is on the BA archives, and some is on John Brewers web site (the fotos of the things I built). It may also be out on other web sites, I think, but dunno exactly where, anymore. Others may know.

> Well, if you have any hesitations, just listen to Bob's Hartleys.
> These are the sweetest sounding transmitters I have ever heard. They
> don't chirp at all. I don't know if we could get the same results, but
> Bob claims the key to success is to loosely couple into the
> oscillator. He only takes a small part of the total generated by the
> oscillator, so it ends up pretty stable. If you really load it down as
> I have heard others do then you get all sorts of chirps and burps.
> That is probably what is behind the 60 watt 833. I bet he won't take
> more than 20 watts of output from the circuit. When I first heard Bob
> on his Hartley I accused him of trying to pull a quick one on me until
> he started waving his hand around the circuit on the next
> transmission! 73 de COnard, ws4s -- Conard Murray WS4S NNNOUTN

Yup, loosen the coupling and don't run the plate at anything above idle for the size tube you are using, and Hartleys sound like Kenicoyasawhooies. Egads, ranking Mr. R.V.L. Hartley's creation with ricenboxen --- ouch. Sorry Mr. Hartley. (Does anyone know if Mr. Hartley should be addressed as Dr. Hartley? I am not sure on that since he got his degrees back in about 1910 or so, and Ph.D.'s were not all that common in engineering.)

Hartleys will pull if your antenna swings in the wind very much, so you need to batten the antenna down and keep the feeder line taut. I generally use end fed wires of about 1/4 wave worked against a 1/4 wave counterpoise, a la Signor Marconi's style antennas (basically a bent/sloping/whatever

grounded Marconi antenna or LOW impedance feed using a series coil and capacitor with a 1 or 2 turn loosely coupled link [and I mean LOOSELY] gives me best results). A dipole will work also, if you series tune the input with the same magic 1 turn link/series coil/series capacitor network, for maximum RF output into the line. Coax is cheating, but it will work. Open wire line is best, if possible. End feeding is second best. Usual Hartleys were end coupled to half wave Hertzian antennas with an open wire Zeppelin feed (1/4 wave impedance transforming line) using a tuned tank to couple into the line. This is the best of all possible feeds/antennas. But, the end fed 1/4 wave works fine in my hands as a simple easy antenna system. A tank can be coupled for voltage feed of an end fed half wave Fuchs antenna, if desired, although I have not used that feed but once or twice. It works, but is touchy to couple and tune.

Maybe I should fire up Grandma Hartley tonight on the BA/GB net, for folks to hear.....

73/ZUT DE NA4G/Bob UP

Date: Tue, 19 Nov 1996 14:21:24 -0500
From: lee@radioadv.com (Lee Richey)
To: <glowbugs@theporch.com>
Subject: 6BM8 wiring and schematic
Message-ID: <19961119192815282.AAA158@lee.radioadv.com>

Hi gang,

By request I posted a .jpg file showing the underside of the 6BM8 tx discussed here and also a half baked try at the schematic. The schematic is a picture of the printed schematic in 640 X 480 format. As you can imagine, the resolution is not all that great but it will give you an idea of the configuration. I hope to post a "real" schematic in a few days after I get some new cad software.

The wiring is at

<http://www.cosmosbbs.com/6bm8wir.jpg>

and the schematic is at

<http://www.cosmosbbs.com/6bm8sch.jpg>

Is there anyone in this group with experience publishing drawings, etc. on the net? If so, what do you find to be

the best tools?

-Lee- -WA3FIY-

<http://www.radioadv.com>

Date: Tue, 19 Nov 1996 12:42:11 -0700
From: jeffd@coriolis.com (Jeff Duntemann)
To: lee@radioadv.com
Cc: glowbugs@theporch.com
Subject: Re: 6BM8 wiring and schematic
Message-ID: <1.5.4.32.19961119123656.00ef7ac4@ntserver.coriolis.com>

At 01:28 PM 11/19/96 -0600, WA3FIY wrote:

>Is there anyone in this group with experience publishing
>drawings, etc. on the net? If so, what do you find to be
>the best tools?

The one big gap in Web data formats is lack of a standard vector format for technical line drawings. It's absurd to use something as big as a GIF or TIF to specify a few hundred vectors.

I use Visio Technical 4 to draw schematics and PC board layouts. It produces by far and away the best printed output of any drawing program I've ever used, and has a professional polish that makes the traditional CAD programs' output look like kid stuff. If you'd like to see some Visio output, I'll be happy to send you a couple of my schematics and PC layouts. Just send me a land address.

Don't use JPEGs to encode line drawings, by the way. JPEG is a lossy format, and you can get some weird discontinuities in your lines. JPEG was really meant for photos and continuous-shade low-resolution images.

I'm playing around with embedding Visio drawings in Microsoft Word document files. This is a trick to enable you to view a Visio drawing without having to have Visio. The great blind spot with the Visio people (and I've excoriated them about this numerous times from my position as a computer magazine editor) is that they haven't released a "dumb viewer" for their file format. It's tough to distribute Visio drawings electronically because you need Visio itself to view and print them.

(One piece of my advice that they DID take is to add a few common tube symbols to their schematic symbol set--of course, after I had gone to the trouble of creating my own!)

More on this as I learn it. If I can get my 6AG7/6L6 schematic into a Word document, I'll put it on my Web site and you guys can download it from there. Word is certainly more common than Visio!

--73--

--Jeff Duntemann KG7JF
Scottsdale, Arizona

Date: Tue, 19 Nov 1996 13:13:30 -0700
From: jeffd@coriolis.com (Jeff Duntemann)
To: glowbugs@theporch.com
Subject: Visio schematics in Word files
Message-ID: <1.5.4.32.19961119130814.0096ec98@ntserver.coriolis.com>

Hi gang--

I just created a Word 6 document file that contains the Visio schematic for the 6AG7/6L6 transmitter I've been working on. It prints nicely and can be viewed in Word, with the plus that you can magnify it in Word to see some of the small print. (I suggest about 175%.) If anybody uses Word and wants to take a look, download the file from my ftp site:

<ftp://ftp.coriolis.com/pub/Shareware/6L635W.DOC>

If entering the complete URL directly doesn't work for you, try using a Web browser to open the directory (that is, pub/Shareware) at our site and then clicking on the name of the file.

I'd be curious to know how well this works for you, and if it's a suitable method for publishing schematics. Word is very popular and while not as good as a freeware Visio viewer (which doesn't exist, sigh) it's better than putting the schematic in a GIF.

Try it and see!

--73--

--Jeff Duntemann KG7JF
Scottsdale, Arizona

Date: Tue, 19 Nov 1996 16:41:10 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
To: glowbugs@theporch.com
Cc: rdkeys@csemail.cropsci.ncsu.edu ()
Subject: Email publishing standards for schematics etc
Message-ID: <9611192141.AA101357@csemail.cropsci.ncsu.edu>

Some thoughts on on-line schematics (which are a great idea by the way):

Although everyone has their pet cat/cad/superdup/whatever format for schematics and the like, the only thing that I have found that works well across all platforms is plain old postscript (encapsulated or eps) or tif files which can be easily converted to eps format for inclusion in almost any sort of document or output device file. Remember, screen resolutions are toy formats. Only when it gets to 300 or 600dpi resolution reliably can it be considered suitable for schematics and decent images, etc. But, the format must be portable, regardless of size. Alas, few such formats are portable. Tif and/or PostScript (EPS particularly) are the best in my hands. Gif and Jpeg are definitely out. Bitmaps are OK, but rather cumbersome at high resolution.

File size is usually not of importance. Resolution and quality are.

If you can, scan any schematics in as high a resolution as you can. It can always be watered down for video display. Once resolution is lost, it is gone for good.

It is also of merit to have any files anyone puts up available as a plain printer file that can be printed on any operating system. Use of any sort of proprietary or specialized format is mostly useless to the bulk of folks. Printer files are very useful because they can be dumped to a good printer and then carried to the workbench. I don't keep a cad workstation handy at the BA workbench.

Also, if you plan your schematics, with a little forethought, they can be set up to fill a set of multiple pages with appropriate overlaps so anyone can print out a good copy on any 8.5x11 (or that eurosized thingie) format. That way, you can blow up your schematics to a reasonable size and then even us myopic olden pfarten can still read them.

Some things to keep in mind.....

.....been there, done that, have yet to find a good solution except for plain ol' jane postscript, amenable to lowendian list participants.

73 de ol' grumplestiltskin.....

p.s. IF anyone finds a better solution that is cheap, reliable, and

generally workable, HOLLER YER BLOODY HEAD OFF! It's gotta be
public domain or cheap and readily available!

Date: Tue, 19 Nov 1996 12:28:13 -0800
From: okasb@rex.mtv.gtegsc.com (Bob Okas)
To: jeffd@coriolis.com
Cc: glowbugs@theporch.com
Subject: Re: Visio schematics in Word files
Message-ID: <9611192028.AA21068@rex.mtv.gtegsc.com>

Jeff and the Gang:

Netscape barfed when I typed in the URL as given. Try:

ftp://ftp.coriolis.com/pub/Shareware/6L635W.doc

^^^ lower case

instead. Works for me!

Bob - W3CD

End of GLOWBUGS Digest 357
